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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,785	01/30/2001	James F. Ziech	60680-491	1549

26127 7590 07/11/2002

DYKEMA GOSSETT PLLC  
39577 WOODWARD AVENUE  
SUITE 300  
BLOOMFIELD HILLS, MI 48304-5086

EXAMINER

TO, TOAN C

ART UNIT PAPER NUMBER

3616

DATE MAILED: 07/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/772,785

Applicant(s)

ZIECH ET AL.

Examiner

Toan C To

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18, 20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☒ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a vehicle engine as recited in claims 4, 9, and 16 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 is unclear, since it appears that the first and second lower suspension control arms and first and second upper suspension control arms form an independent front suspension but not "comprise" an independent front suspension.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6-8, 13-15, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kami et al (U.S. 5,560,651).

As to claims 1-3, and 6-8, Kami et al discloses a sub-frame assembly with the following: a first and second cross members (2, 3) being integral with a first and second side members (1) and configured to receive first and second lower suspension control arms (11<sub>1</sub>, 13<sub>1</sub>), first and second upper suspension control arms (14<sub>1</sub>, 15<sub>1</sub>), and a steering linkage (17<sub>1</sub>); wherein, the first and second cross members (2, 3) configured to receive the first and second lower suspension control arms (11<sub>1</sub>, 13<sub>1</sub>); the first and second side members (1) configured to receive the first and second upper suspension control arms (14<sub>1</sub>, 15<sub>1</sub>).

As to claims 13-15 and 18, Kami et al discloses a vehicle subassembly with the following: a sub-frame (SF) having a first and second cross members (2, 3) being integral with a first and second side members (1); first and second lower suspension control arms (11<sub>1</sub>, 13<sub>1</sub>) coupled to the sub-frame (SF), first and second upper suspension control arms (14<sub>1</sub>, 15<sub>1</sub>) coupled to the sub-frame (SF), and a steering linkage (17<sub>1</sub>) coupled to the sub-frame (SF); wherein, the first and second cross members (2, 3) configured to receive the first and second lower suspension control arms (11<sub>1</sub>, 13<sub>1</sub>); the first and second side members (1) configured to receive the first and second upper suspension control arms (14<sub>1</sub>, 15<sub>1</sub>).

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6. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Miura et al (U.S. 4,723,791).

As to claims 1-3, Miura et al discloses a sub-frame for a motor vehicle with the following: a first and second side members (40); first and second cross members (42, 44), wherein each of the first and second cross members (42, 44) integral with the first and second side members (see column 4, lines 42-45), and configured to receive first and second lower suspension control arms (18, 20); wherein, the first and second side members (40) are configured to receive the first and second upper suspension control arms (16).

7. Claims 1-3, 5-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamei et al (U.S. 5,562,308).

As to claims 1, and 6, Kamei et al discloses a sub-frame for a motor vehicle with the following: a first and second side members (3); first and second cross members (1, 2), wherein each of the first and second cross members (1, 2) integral with the first and second side members (3); and first and second cross members (1, 2) and first and second side members (3) being configured to receive first and second lower suspension control arms (12), first and second upper suspension control arms (11), and idler arm of steering linkage (15).

As to claims 2, and 7, Kamei et al discloses a sub-frame with the following: wherein, the first and second cross members (1, 2) are configured to receive the first and second lower suspension control arms (12).

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As to claims 3, and 8, Kamei et al discloses a sub-frame with the following: wherein, the first and second side members (3) are configured to receive the first and second upper suspension control arms (11).

As to claim 5, and 10, Kamei et al further discloses a sub-frame for motor vehicle with the following: wherein the first cross member (1) is configured to receive a strut rod (18).

8. Claims 13, 14-15, and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamei et al (U.S. 5,562,308).

Kamei et al discloses a vehicle subassembly with the following: a sub-frame (SF) having first and second side members (3); first and second cross members (1, 2); each of the first and second cross members (1, 2) integral with the first and second side members (3); first and second lower suspension control arms (12) coupled to the sub-frame (SF); first and second upper suspension control arms (11) coupled to the sub-frame (SF).

As to claim 14, Kamei et al discloses a vehicle subassembly with the following: wherein, the first and second cross members (1, 2) are configured to receive the first and second lower suspension control arms (12).

As to claim 15, Kamei et al discloses a vehicle subassembly with the following: wherein, the first and second side members (3) are configured to receive the first and second upper suspension control arms (11).

As to claim 17, Kamei et al further discloses a vehicle subassembly with the following: wherein the first cross member (1) is configured to receive a strut rod (18).

As to claim 18, Kamei et al further discloses a vehicle subassembly with the following: a steering linkage (15) coupled to the sub-frame (SF).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-3, 6-8, 13-15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kami et al.

Kami et al discloses every elements of the invention as discussed above except that Kami et al does not directly disclose the first and second cross members integral with the first and second side members. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Kami et al by having the first and second cross member integral with the first and second side members, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Store Works*, 150 U.S. 164 (1893).

11. Claims 1, 4 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamei et al (U.S. 5,609,366) in view of Miura et al:

Kamei et al discloses a sub-frame for motor vehicle with the following: first and second cross members (3, 4) integral with first and second side members (2); wherein,

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the first and second cross members (3, 4) and the first and second side members (2) are configured to receive first and second lower suspension arms (10); a third cross member (5) integral with the first and second side members (2), the third cross member (5) configured to support an engine of the vehicle (see column lines 38-45); and an upper suspension arm (see figure 1).

Kamei et al does not directly disclose the first and second cross members and the first and second side member are configured to receive an upper suspension arm.

Mirua et al teaches a sub-frame for motor vehicle, wherein the first and second cross members (42, 44) and the first and second side member (40) are configured to receive an upper suspension arm (16) in order to ensure ride comfort and at the same time to improve controllability of the vehicle.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sub-frame of Kamei et al as taught by Mirua et al to include the following: the first and second cross members and the first and second side member are configured to receive an upper suspension arm in order to ensure ride comfort and at the same time to improve controllability of the vehicle.

12. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamei et al (U.S. 5,609,366) in view of Kamei et al (U.S. 5,562,308).

U.S. 5,609,366 discloses a sub-frame for motor vehicle with the following: first and second cross members (3, 4) integral with first and second side members (2); wherein, the first and second cross members (3, 4) and the first and second side members (2) are configured to receive first and second lower suspension arms (10); a



third cross member (5) integral with the first and second side members (2), the third cross member (5) configured to support an engine of the vehicle (see column lines 38-45); and an upper suspension arm (see figure 1).

U.S. 5,609,366 does not directly disclose the first and second cross members and the first and second side member are configured to receive an upper suspension arm and steering linkage.

U.S. 5,562,308 teaches a sub-frame for motor vehicle, wherein the first and second cross members (1, 2) and the first and second side member (3) are configured to receive an upper suspension arm (11) and steering linkage (15) in order to ensure ride comfort and at the same time to improve controllability of the vehicle.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sub-frame of U.S. 5,609,366 as taught by U.S. 5,562,308 to include the following: the first and second cross members and the first and second side member are configured to receive an upper suspension arm in order to ensure ride comfort and at the same time to improve controllability of the vehicle.

13. Claims 1, 6, 11-12, and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al (U.S. 4,817,986) in view of Miura et al (U.S. 4,723,791).

Kanazawa et al discloses a sub-frame for motor vehicle with the following: a first and second side members (32R, 32L); first and second cross members (33, 34), each of the first and second cross members (33, 34) integral (inherently disclosed) with first and second side members (32R, 32L); wherein, the first and second side members

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(32R, 32L) and the first and second cross members (33, 34) are configured to receive the lower suspension arms (35L, 35R), an idler arm (115R) of a steering linkage (11), and a steering gear (111).

Kanazawa et al does not directly disclose a sub-frame for motor vehicle: wherein the first and second side members and the first and second cross members are configured to receive first and second upper suspension control arms.

Miura et al teaches a sub-frame for motor vehicle: wherein the first and second side members (40) and the first and second cross members (42, 44) are configured to receive first and second upper suspension control arms (16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sub-frame of Kanazawa et al as taught by Miura et al in order to ensure riding comfort and at the same time to improve controllability of the vehicle.

14. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamei et al (U.S. 5,609,366) in view of Miura et al (U.S. 4,723,791).

Kamei et al discloses a vehicle subassembly with the following: a sub-frame having a first and second side members, a first and second cross members, wherein each of the first and second cross member integral with the first and second side members, a third cross member integral with the first and second side members to support the engine; a first and second lower suspension control arms coupled to the sub-frame; a first and second upper suspension control arms.

Kamei et al does not directly disclose a vehicle subassembly, wherein the first and second upper control arm coupled to the sub-frame.

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Miura et al teaches vehicle subassembly, wherein the first and second upper control arms (16) coupled to the sub-frame (14). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a vehicle subassembly of Kamei et al as taught by Miura et al to include the following: the first and second upper control arm coupled to the sub-frame in order to ensure ride comfort and at the same time to improve controllability of the vehicle.

15. Claims 13, 18 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al (U.S. 4,817,986) in view of Miura et al (U.S. 4,723,791).

Kanazawa et al discloses vehicle subassembly with the following: a sub-frame (31) comprising a first and second side members (32R, 32L), first and second cross members (33, 34), each of the first and second cross members (33, 34) integral (inherently disclosed) with first and second side members (32R, 32L); wherein, the vehicle sub-assembly further having first and second lower suspension arms (35L, 35R) coupled to the sub-frames (31), a steering linkage (11) coupled to the sub-frame (31), and a steering gear (111) mounted on the sub-frame (31).

Kanazawa et al does not directly disclose a vehicle subassembly: wherein the first and second upper suspension control arms coupled to the sub-frame.

Miura et al teaches a vehicle subassembly: wherein, first and second upper suspension control arms (16) coupled to the sub-frame (SF). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sub-frame of Kanazawa et al as taught by Miura et al in order to ensure riding comfort and at the same time to improve controllability of the vehicle.

### ***Response to Arguments***

16. Applicant's arguments filed March 18, 2002 have been fully considered but they are not persuasive. The prior art reference still read on the claimed limitations.

In response to applicant's argument that Kami et al (U.S. 5,560,651) does not disclose or suggest "each of first and second cross member integral with said first and second side members", the examiner respectfully disagree because the following reasons: *In re Hotte*, (CCPA) 177 USPQ 326 states that "Integral is sufficient broad to embrace constructions united by such means as fastening and welding"; and *In re Kohno*, (CCPA) 157 USPQ 275 states that "Integral is not necessarily restricted to one piece article", in this case, Kami et al discloses a sub-frame SF having a first cross member 2 being fastened to the front ends of the first and second side members 1 by the outer sleeve 5, and the second cross member 3 being fastened to the rear ends of the first and second side members 1 by the outer sleeve 5 (see column 5, lines 20-65), in order word, the first and second cross members being fastened together and formed as a unit with the first and second side members. Therefore, the examiner considered that the first and second cross members are integral with the first and second side members.

### ***Conclusion***

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan To whose telephone number is (703) 306-5951. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson, can be reached on (703) 308-2089. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-2571. Any inquiry of a general nature or relating to the status of this application or this application or proceeding should be directed to the receptionist whose telephone number is (703)305-1113.

To, T

July 5, 2002



ERIC CULBRETH  
PRIMARY EXAMINER

7/8/02